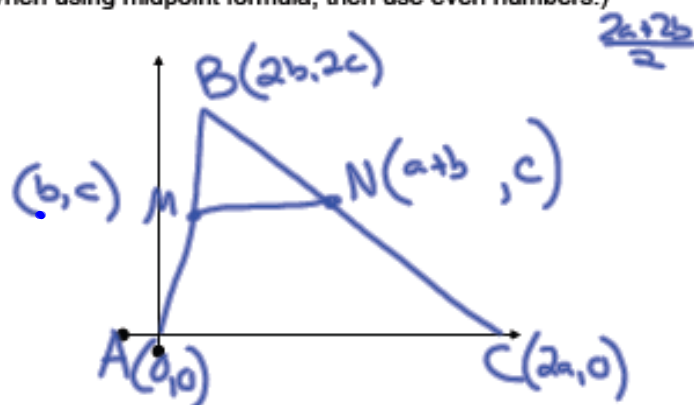


Example 7

A line segment, \overline{MN} , joins the midpoints of 2 sides of $\triangle ABC$
 (When using midpoint formula, then use even numbers.)



Prove: $\overline{MN} \parallel \overline{AC}$
 $MN = \frac{1}{2} AC$

$$\overline{MN} \quad m = \frac{c-c}{a+b-b} = \frac{0}{a} = 0$$

$$\overline{AC} \quad m = \frac{0-0}{2a-0} = \frac{0}{2a} = 0$$

$\overline{MN} \parallel \overline{AC}$ b/c
 they have the
 same slope.

$$MN = \sqrt{a^2 + 0^2} = a$$

$$AC = \sqrt{(2a)^2 + 0^2} = 2a$$

$$a = \frac{1}{2} 2a$$

$$a = a \checkmark \quad \therefore MN = \frac{1}{2} AC$$